

**VARIABLE GAIN LOW NOISE AMPLIFIER AND METHOD**

**ABSTRACT OF THE DISCLOSURE**

A variable gain control amplifier (10) and method provides a substantially constant input impedance and output impedance, and provides a substantially constant noise figure and third order harmonic. The variable gain control amplifier (10) includes an amplifier stage including at least a first intermediate fixed gain stage (22) operative to produce a first intermediate signal (30) in response to the input signal (20). The variable gain control amplifier (10) further includes at least a second intermediate fixed gain stage (24) operative to produce an output signal (18) in response to the first intermediate signal (30). A feedback circuit (16) is operative to produce a gain control signal (32) in response to the output signal (18). A gain control circuit (26) is coupled to the at least first intermediate fixed gain stage (22) and the second intermediate fixed gain stage (24), and receives the gain control signal (32) to control an amplitude of the intermediate signal (30).